

FIG. 2

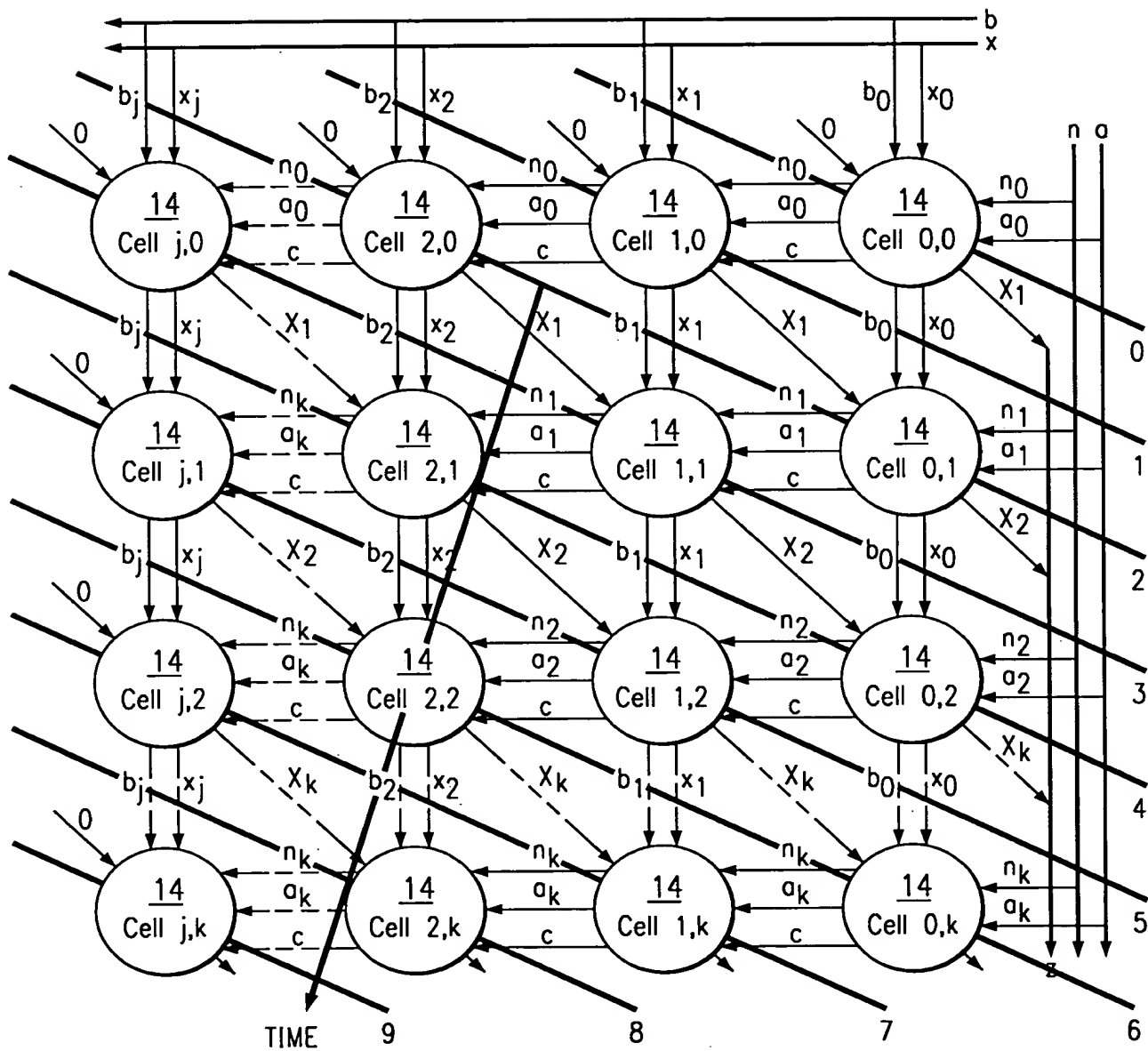


FIG. 3

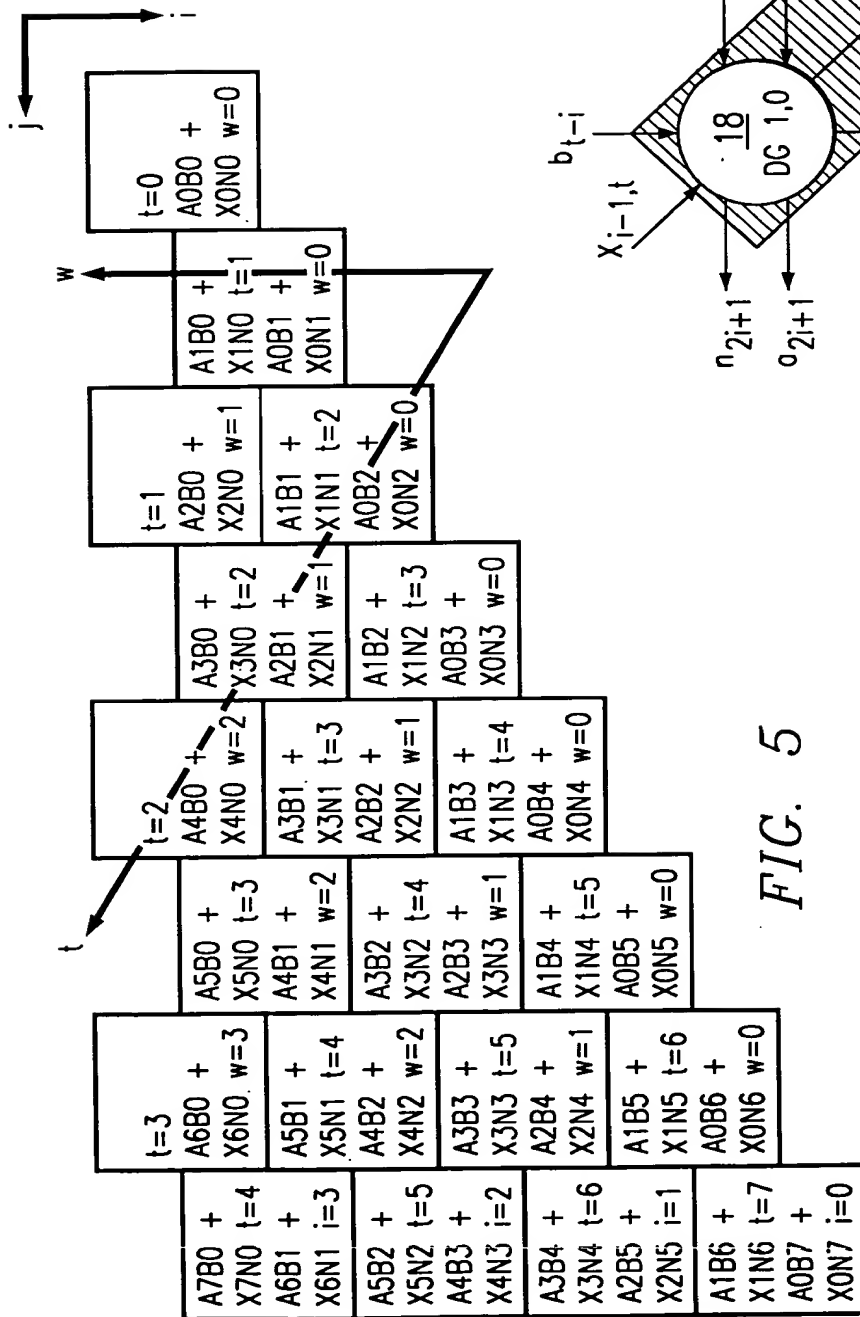


FIG. 5

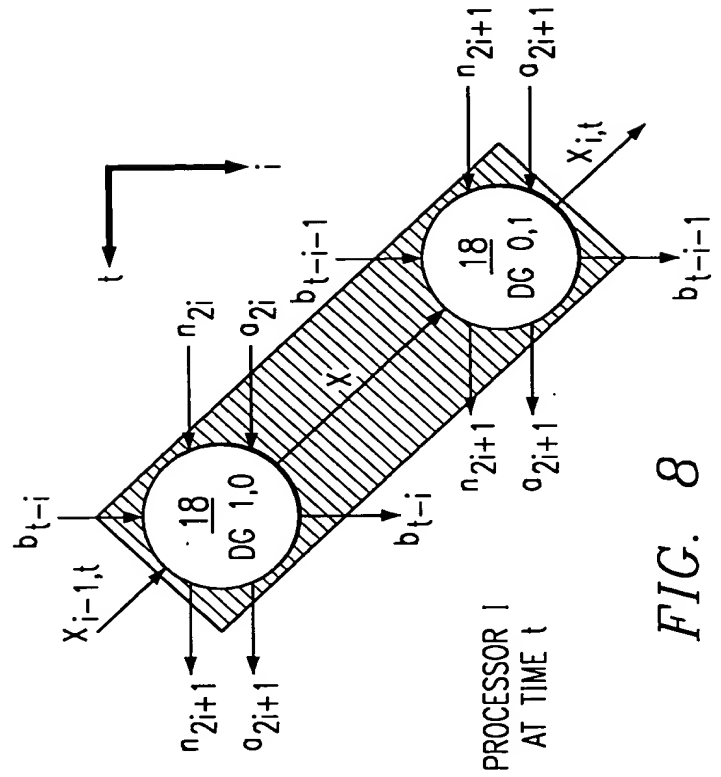


FIG. 8

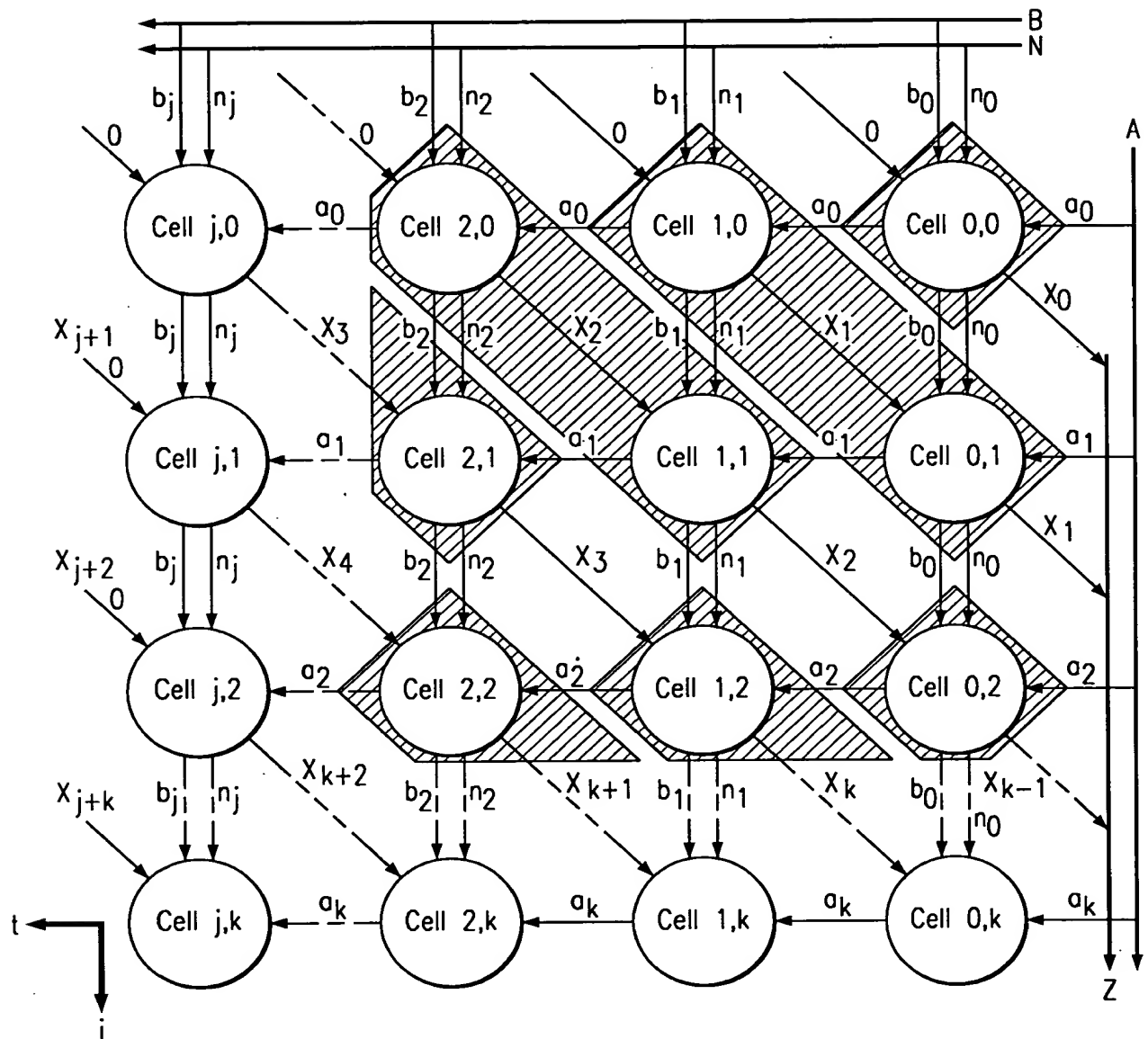


FIG. 6

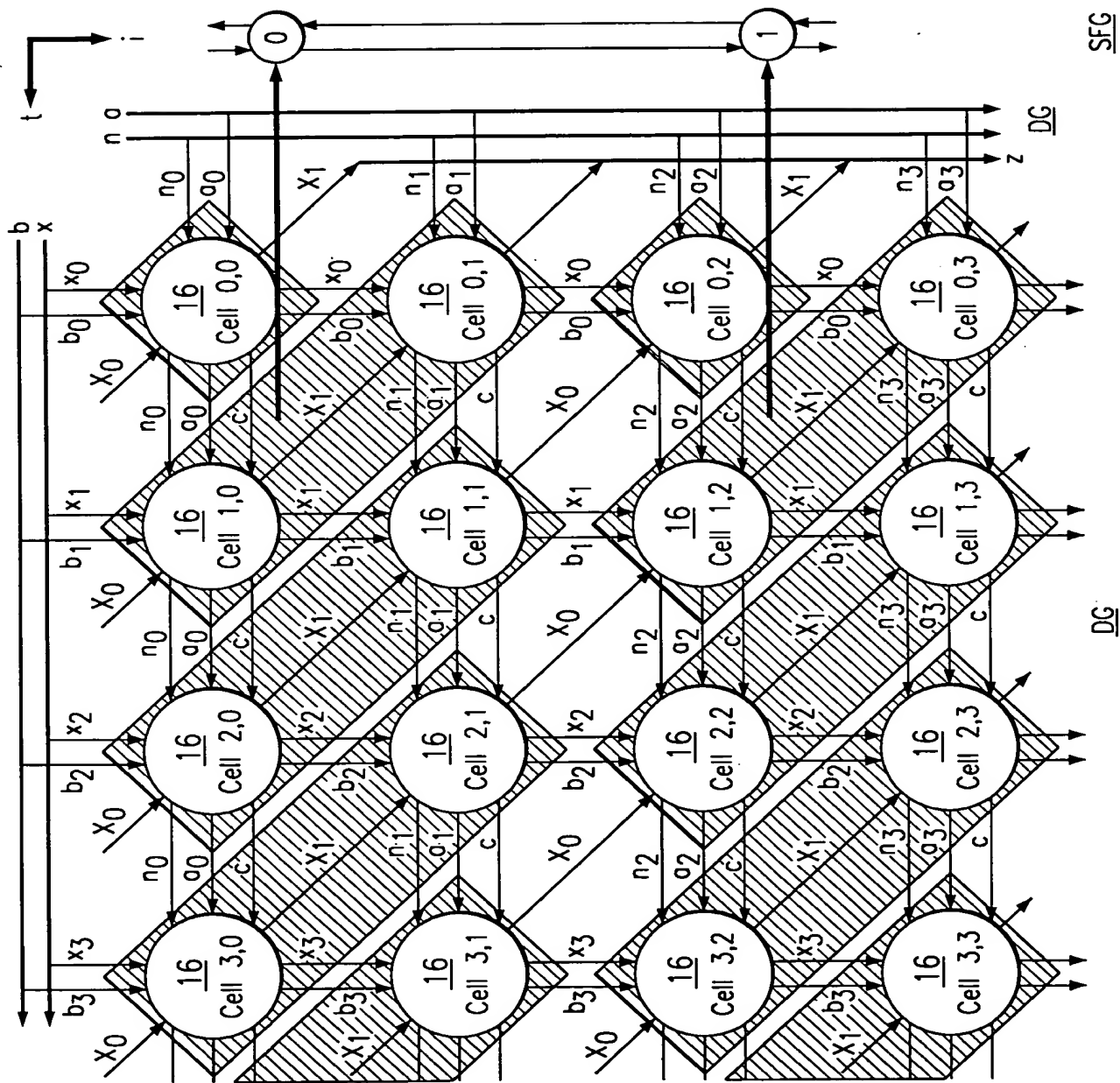


FIG. 7

SFG

DATE: 2009060

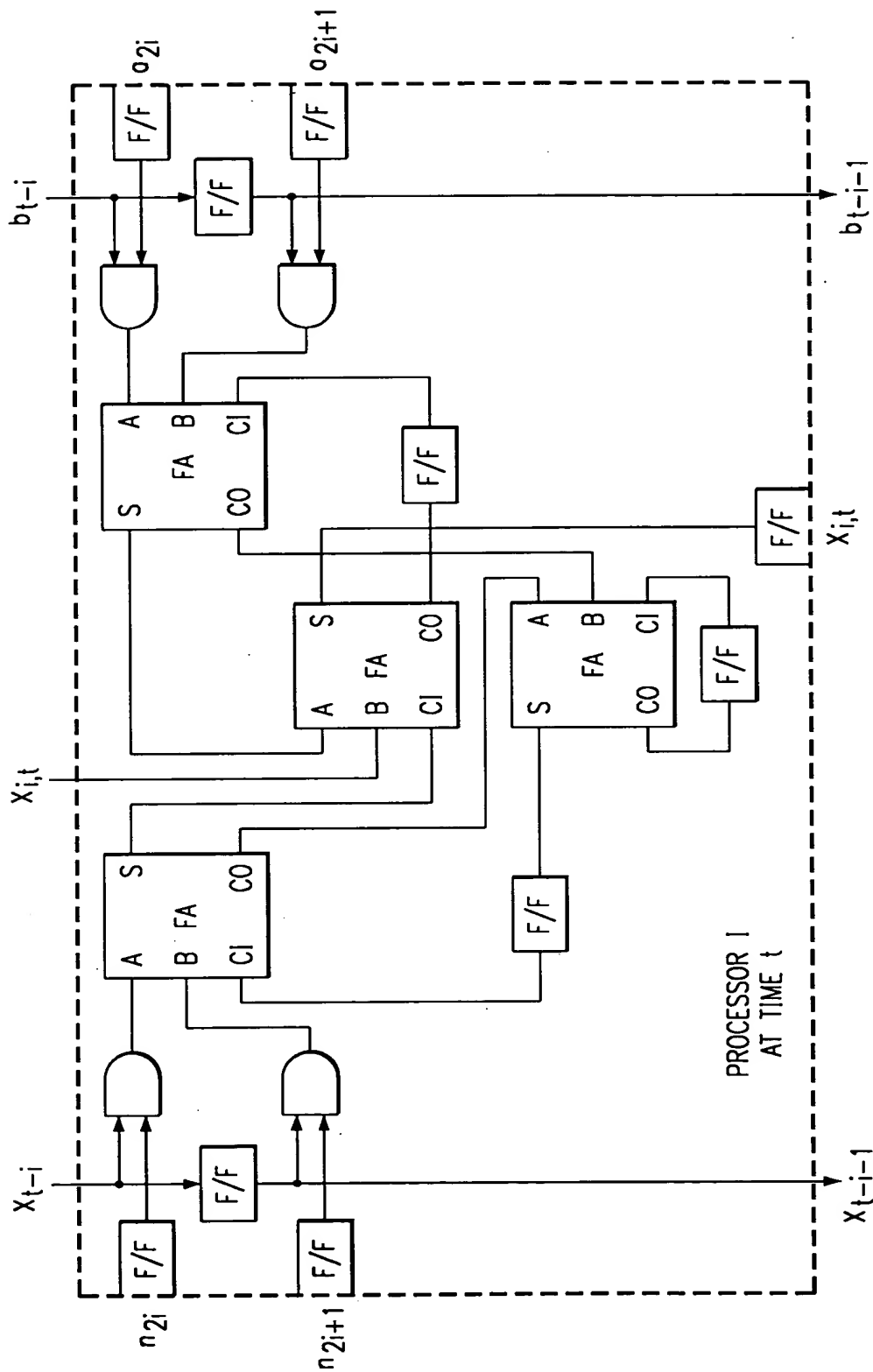


FIG. 9

```

Process TypicalBinaryMultiply (A,B)
Z:=0;
For i in 0 to n-1 loop
  c := 0;
  For j in 0 to n-1 loop
     $Z_{i+j} := (Z_{i+j} + A_i * B_j + c) \bmod 2;$ 
     $c := (Z_{i+j} + A_i * B_j + c) \text{ div } 2;$ 
  end loop;
  for j in n to  $2n-1$  loop
     $Z_j := (Z_j + c) \bmod 2;$ 
     $c := (Z_j + c) \text{ div } 2;$ 
  end loop;
  transmit  $Z_i$ ;
end loop;

```

```

Process Reduce( $Z_j$ ,  $N$ )
 $c := 0$ ;
For  $i$  in 0 to  $n-1$  loop
    → wait for  $Z_j$ ;
     $X_i := Z_j$ ;
     $X_i := (X_i + x * N_i + c) \text{ mode } 2$ ;
     $c := (X_i + x * N_i + c) \text{ div } 2$ ;
end loop;
 $X := X/2$ ;
For  $i$  in 1 to  $k-1$  loop
     $x = X \text{ mod } 2$ ;  $c := 0$ ;
    For  $j$  in 0 to  $n-1$  loop
         $X_j = (X_j + x * N_j + c) \text{ mod } 2$ ;
         $c = (X_j + x * N_j + c) \text{ div } 2$ ;
    end loop;
     $X = X/2$ ;
end loop;

```

BITS OF Z FEED  
SEQUENTIALLY  
ACROSS

FIG. 10

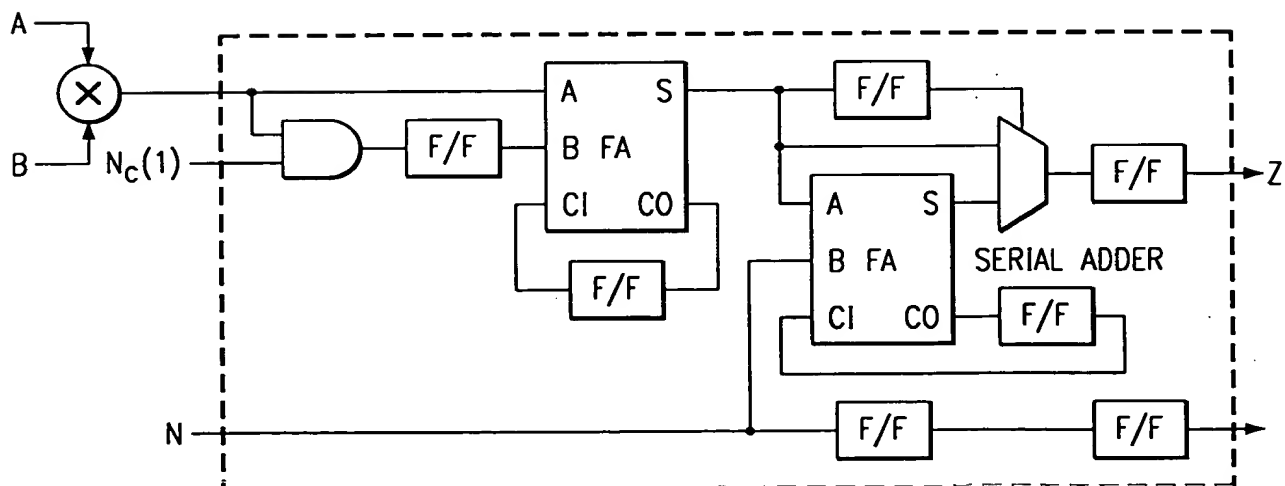


FIG. 18



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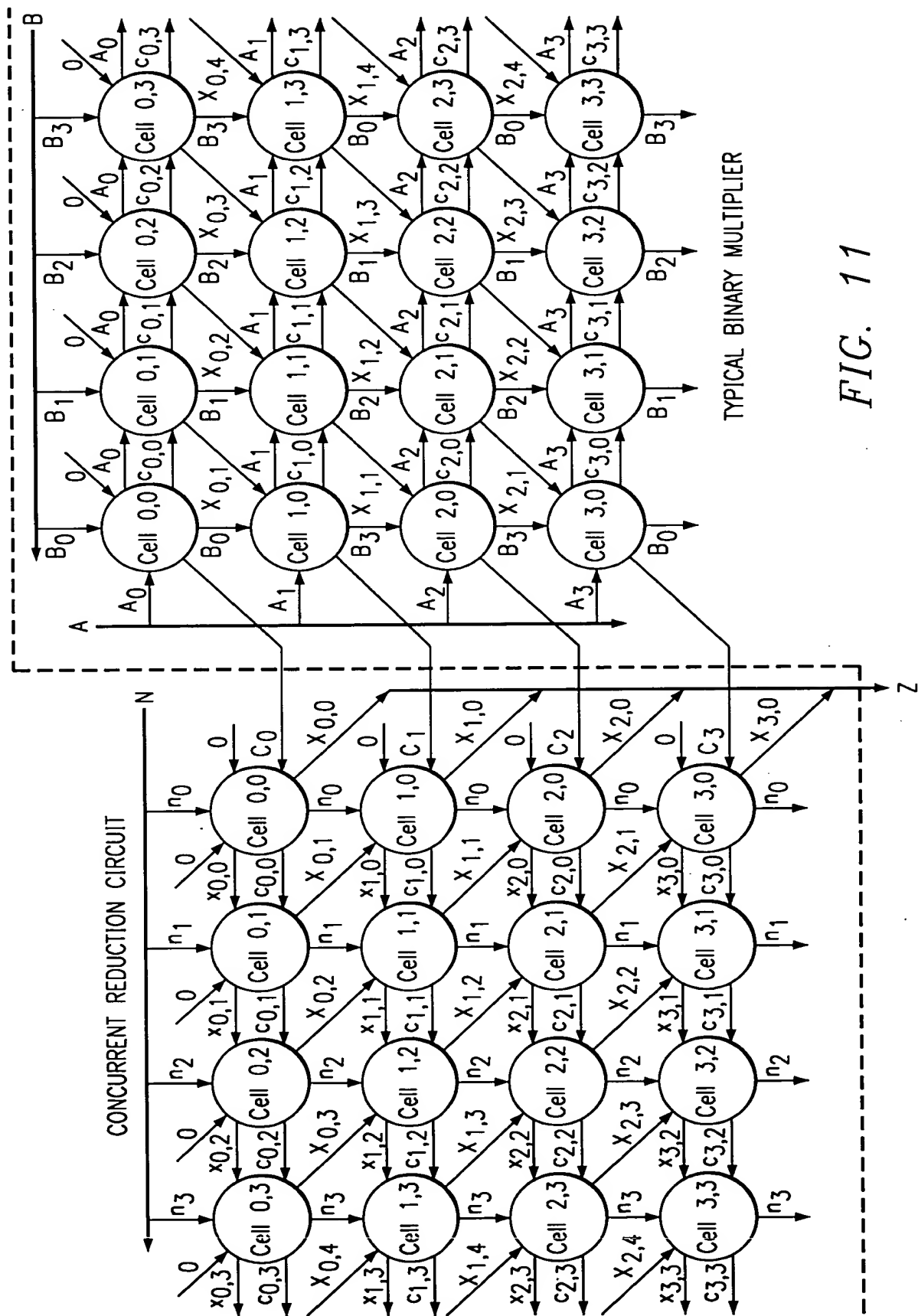


FIG. 11

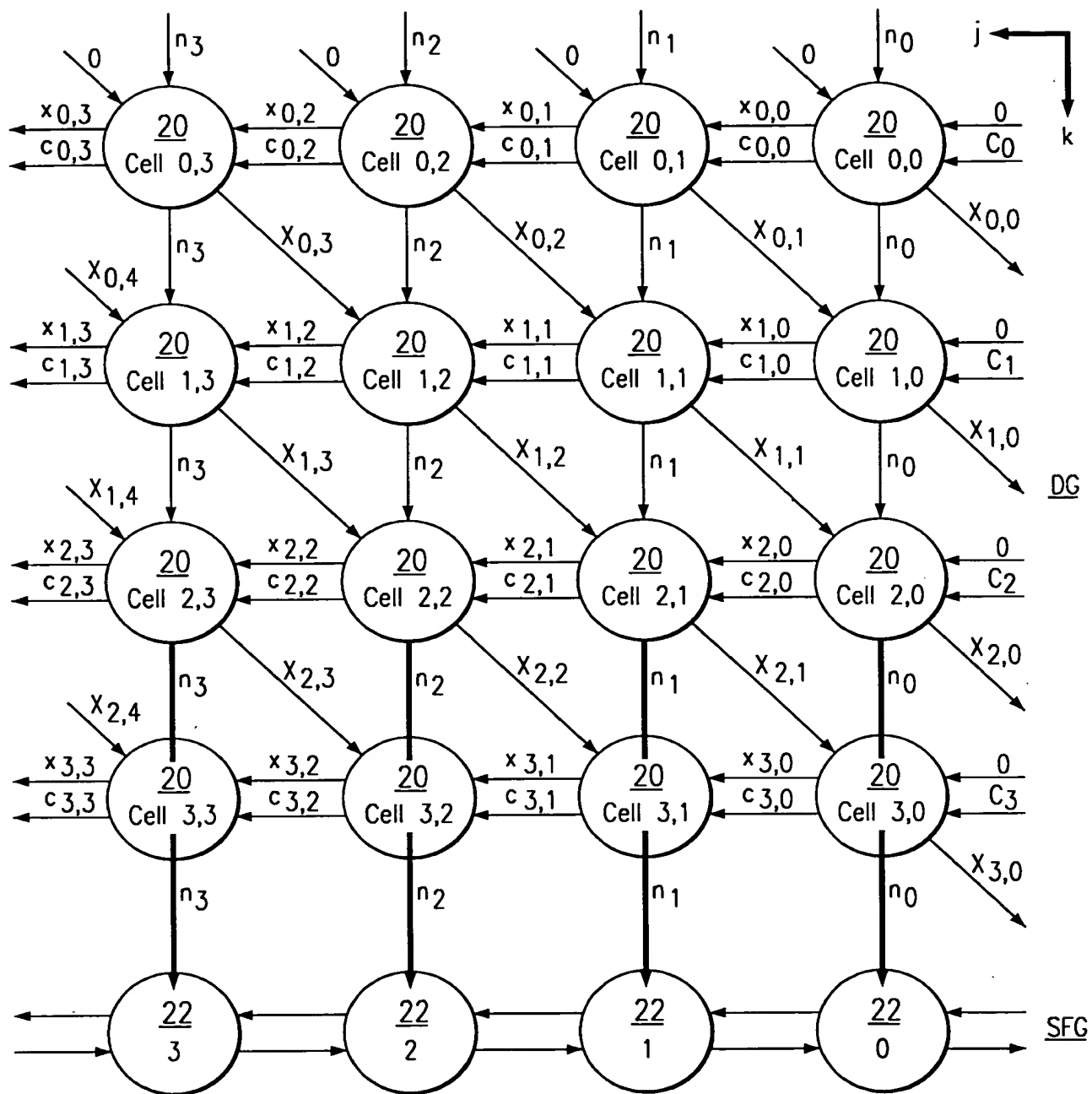


FIG. 12

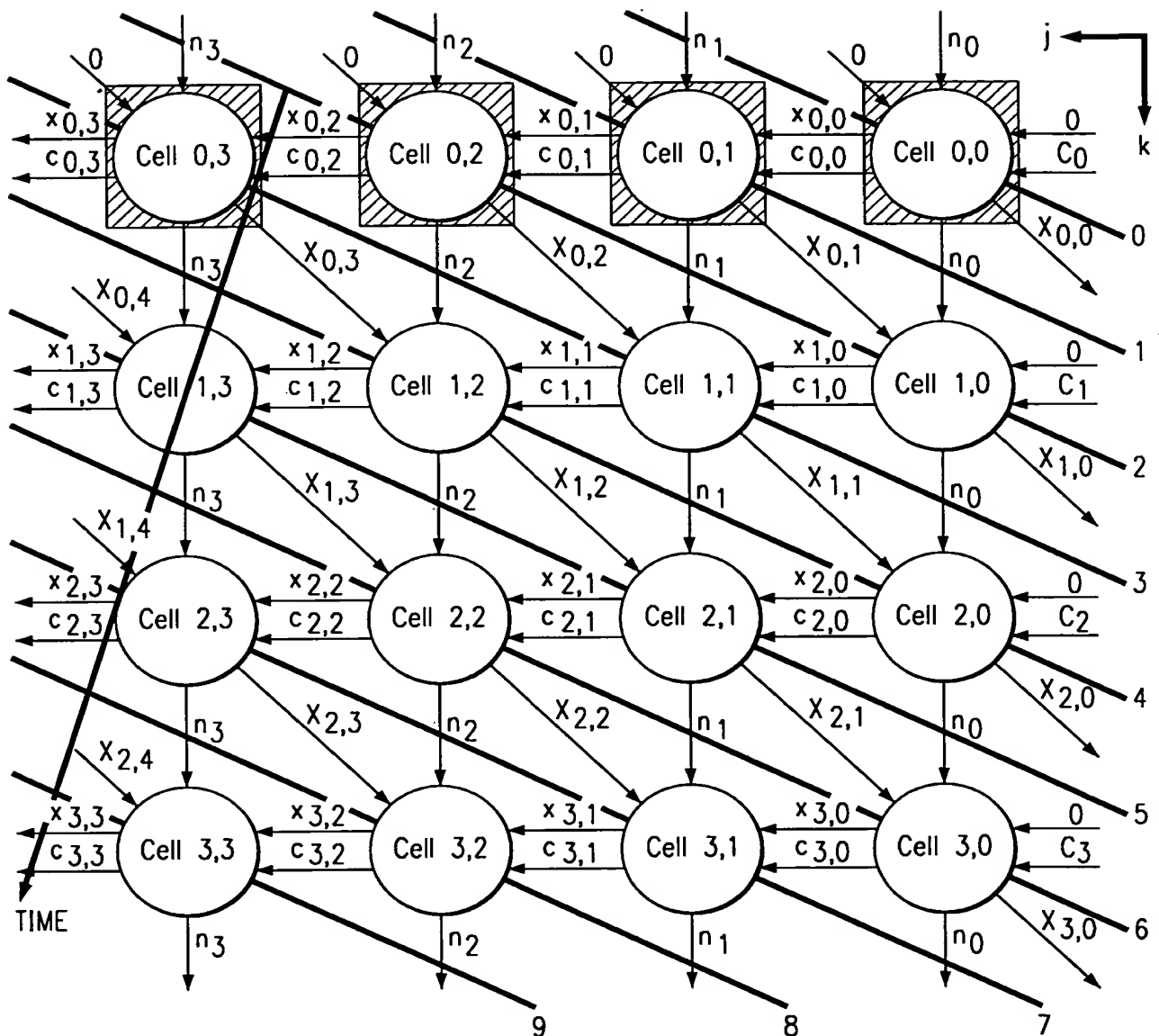


FIG. 13

FIG. 14

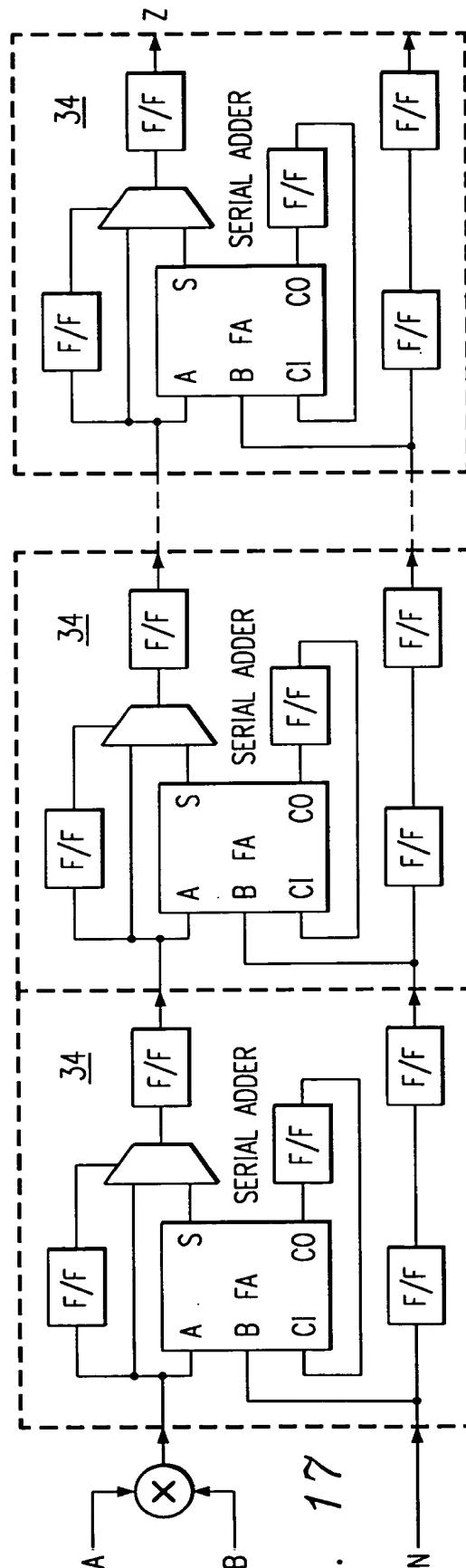
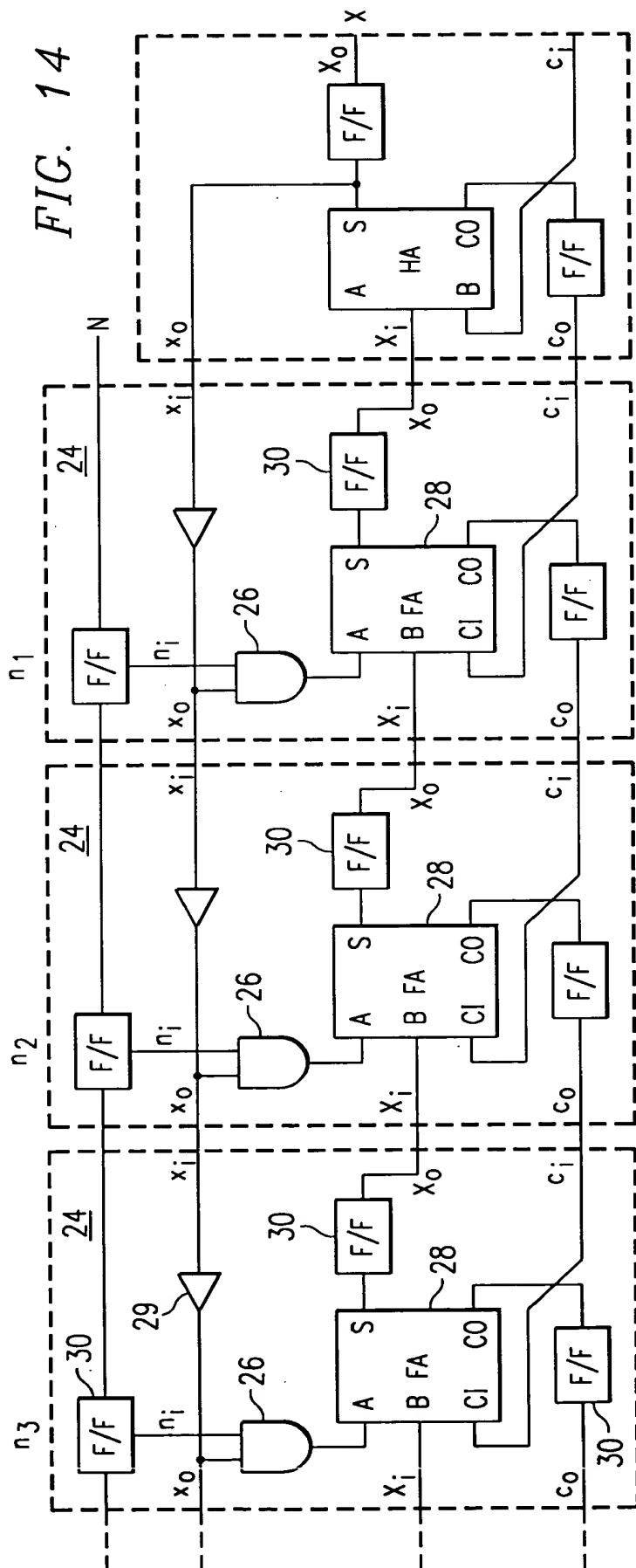
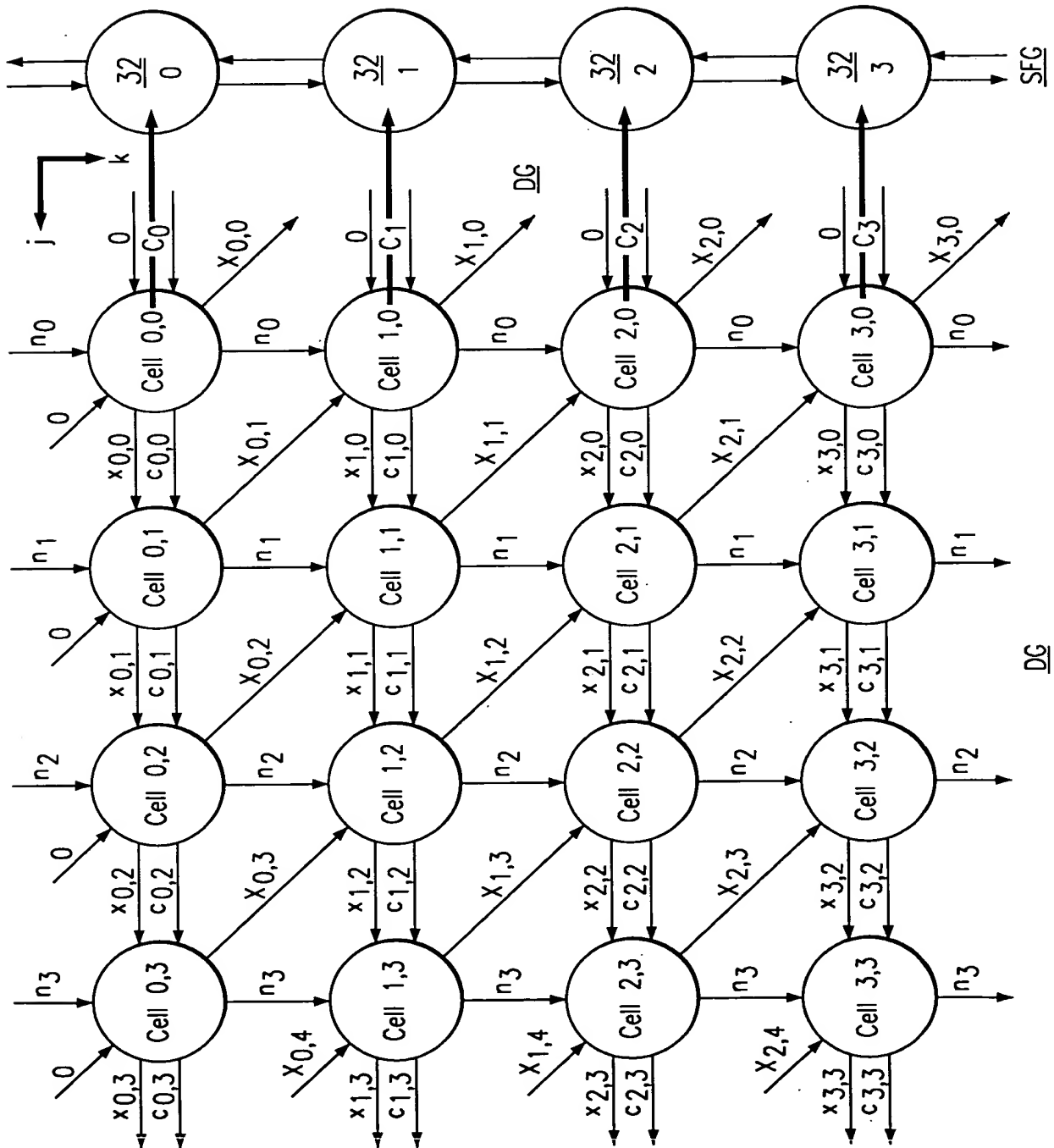


FIG. 17

FIG. 15



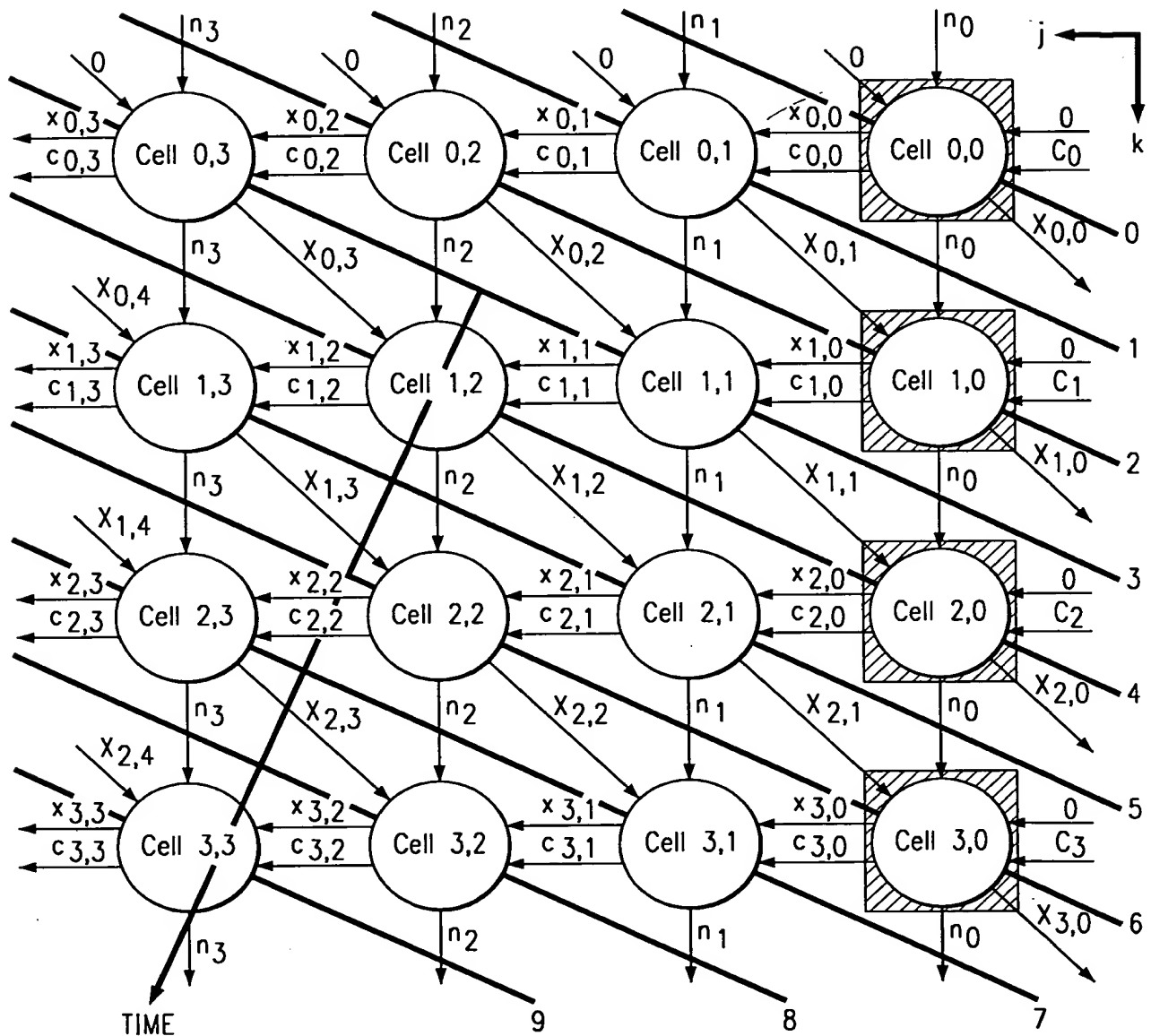
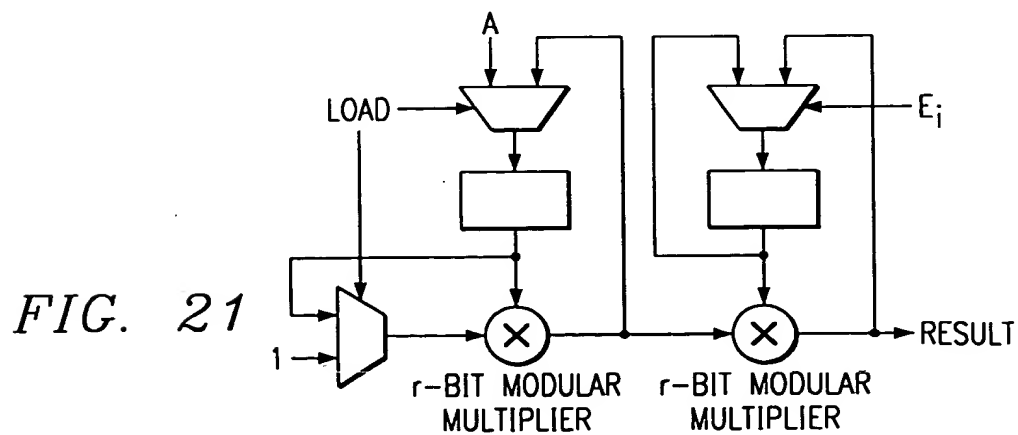
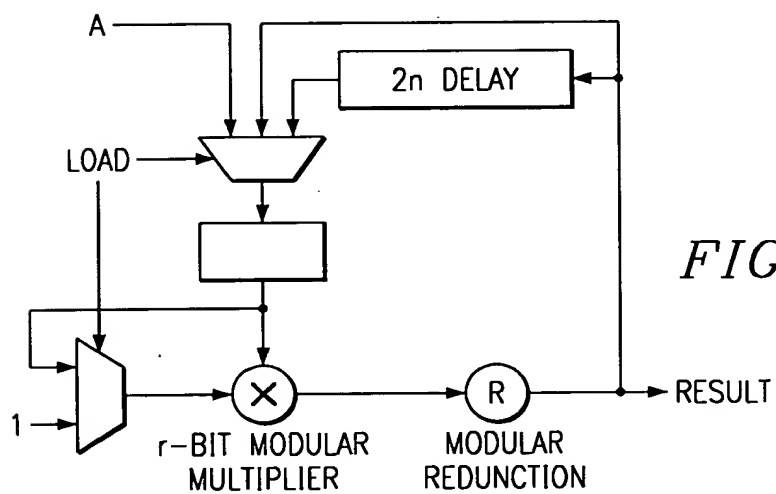
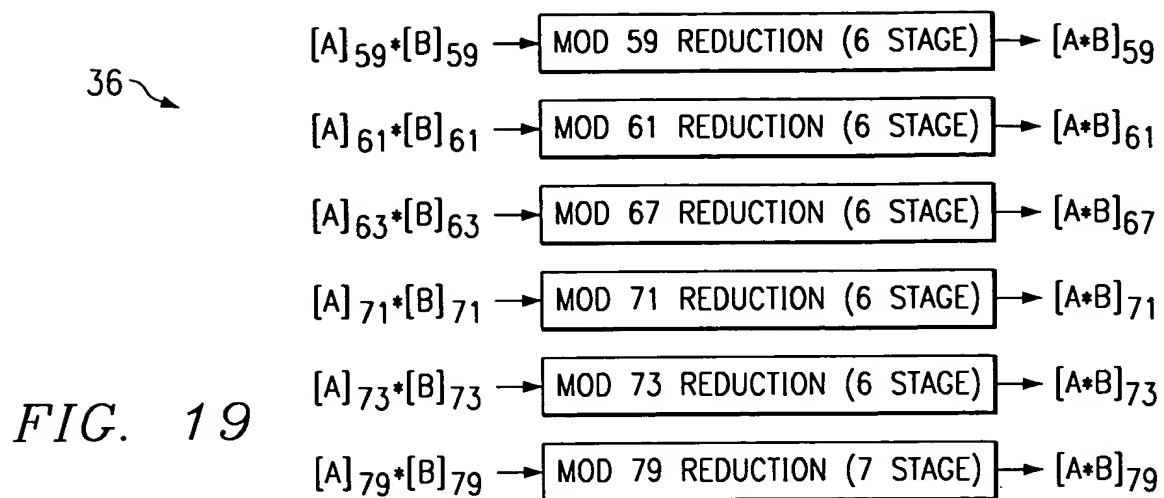


FIG. 16



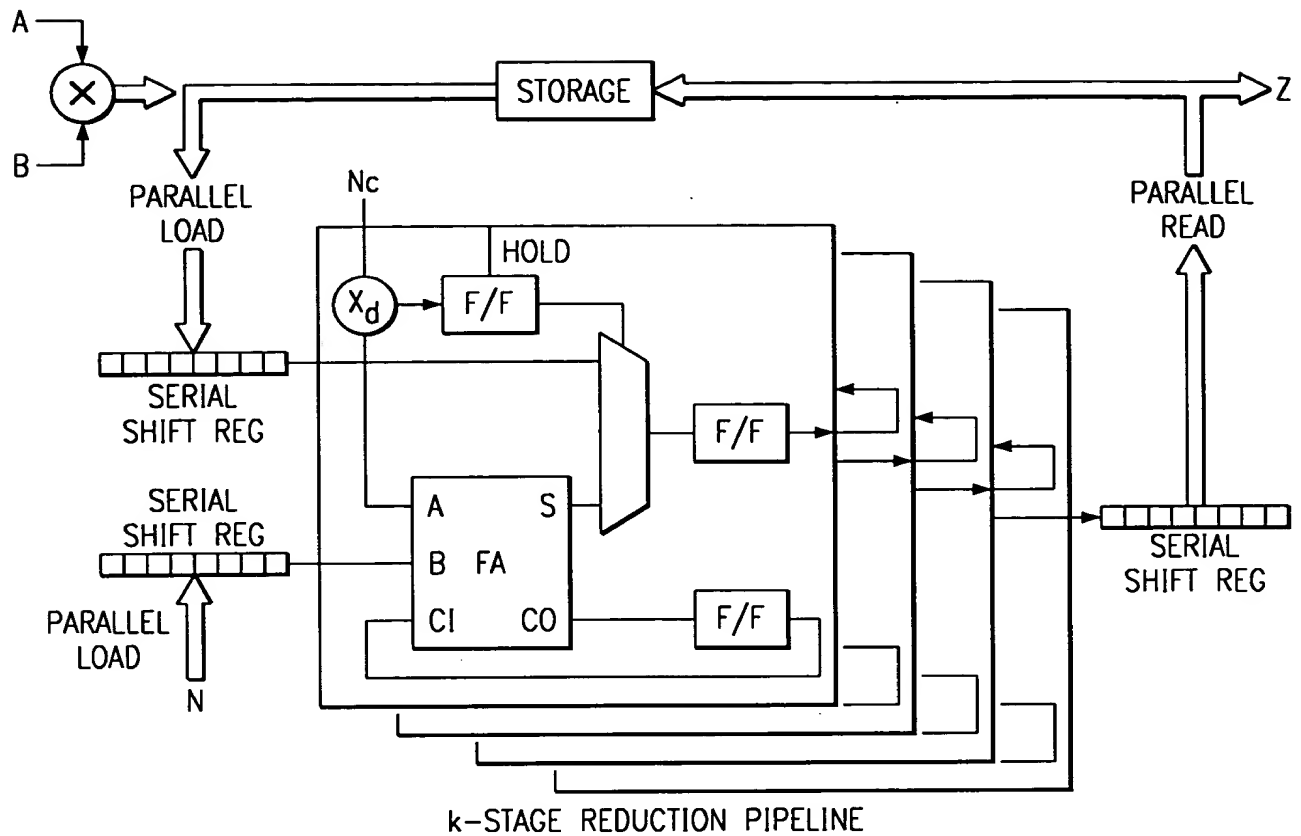


FIG. 22

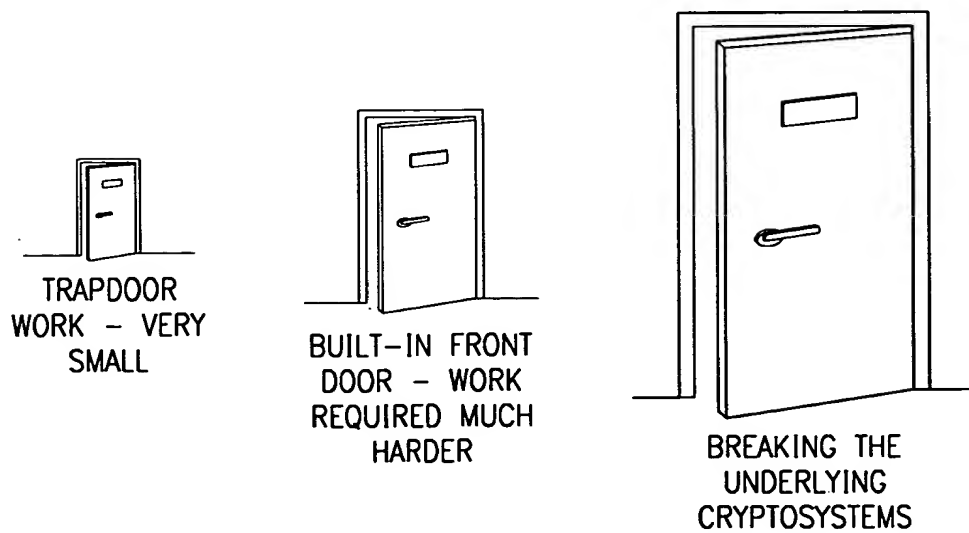
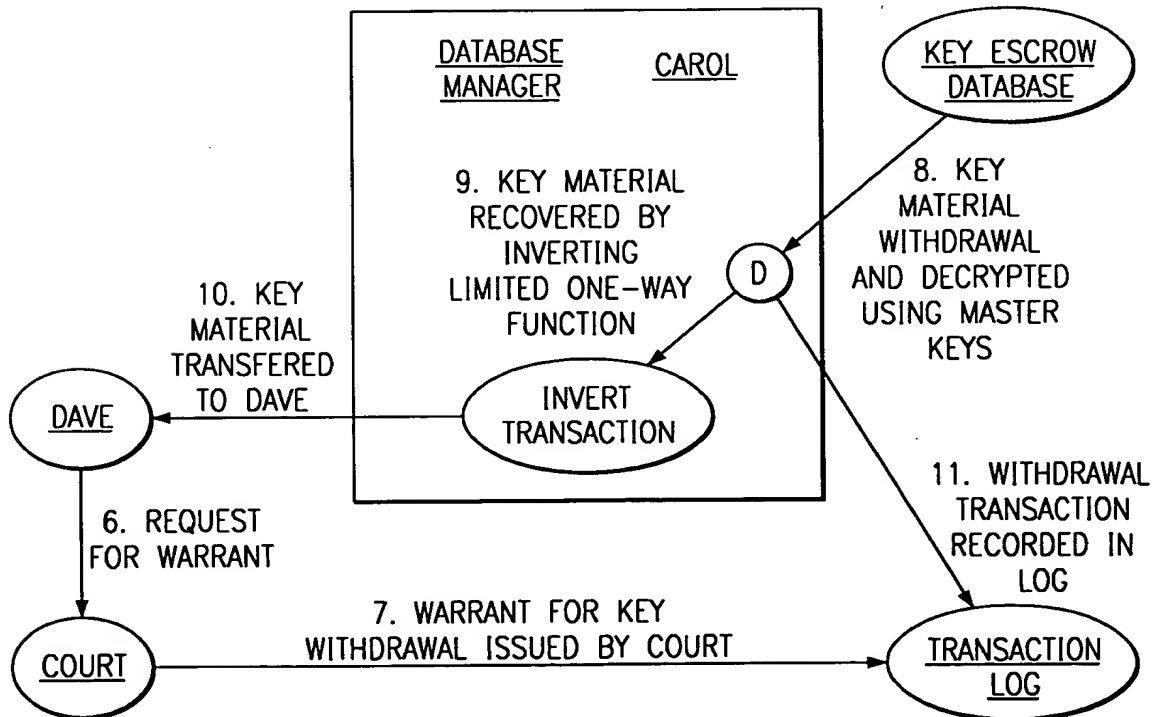
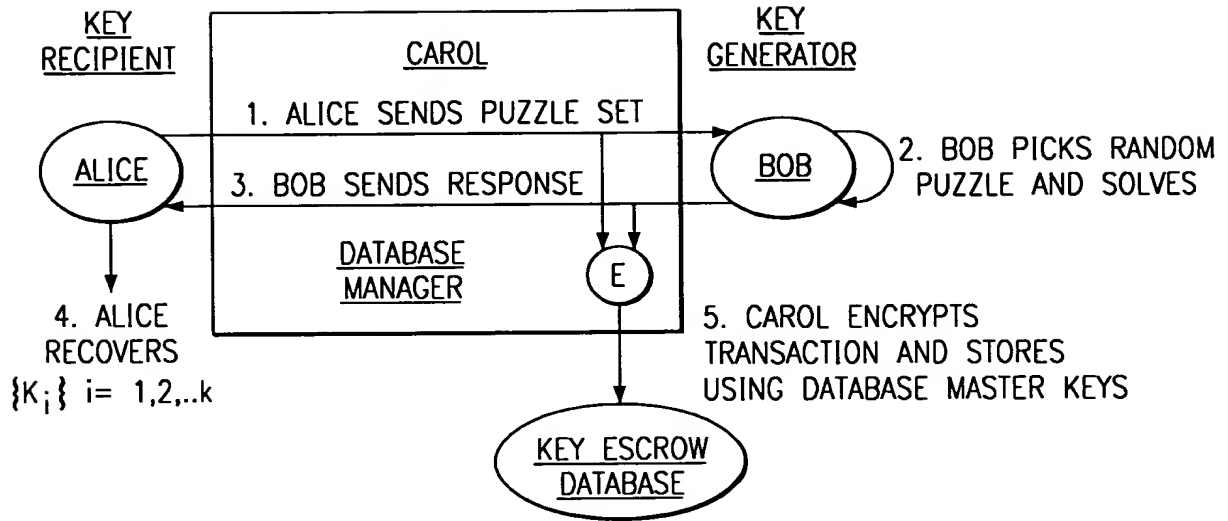


FIG. 23





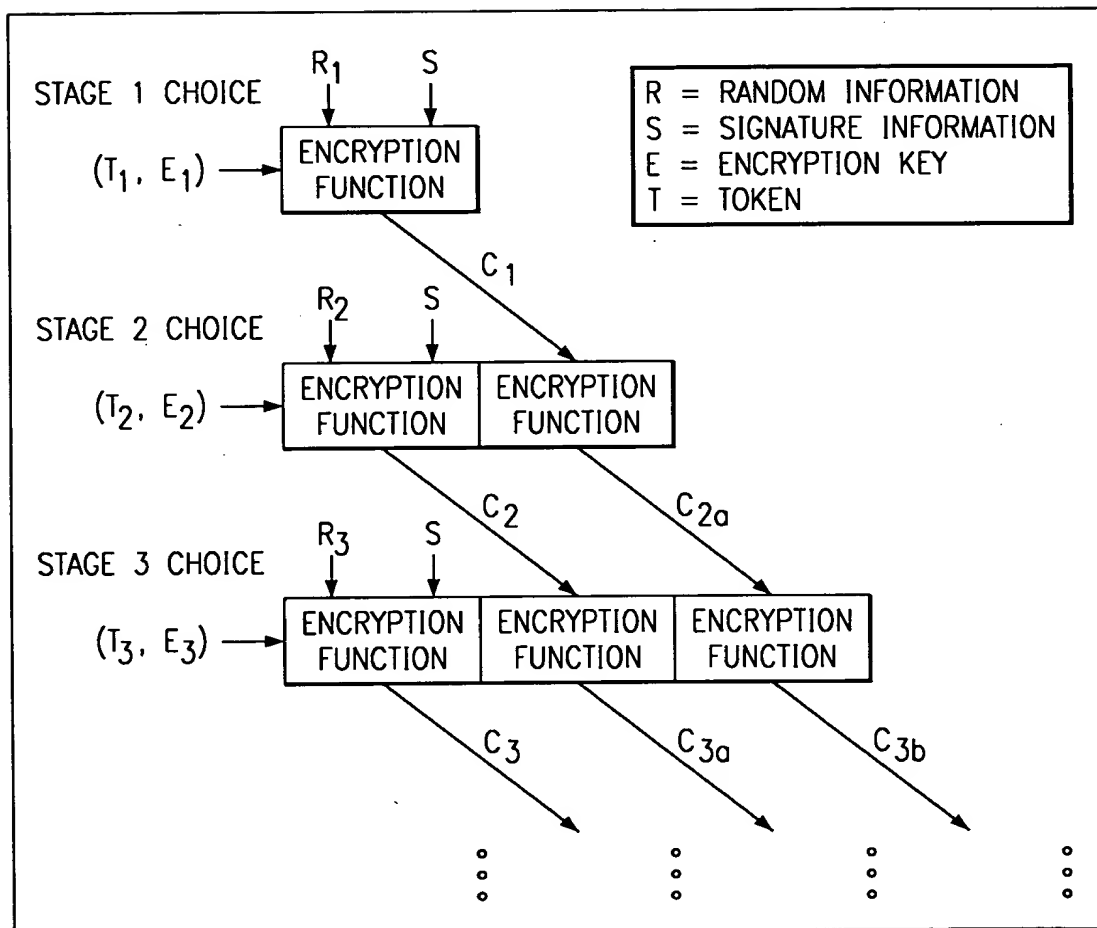


FIG. 26

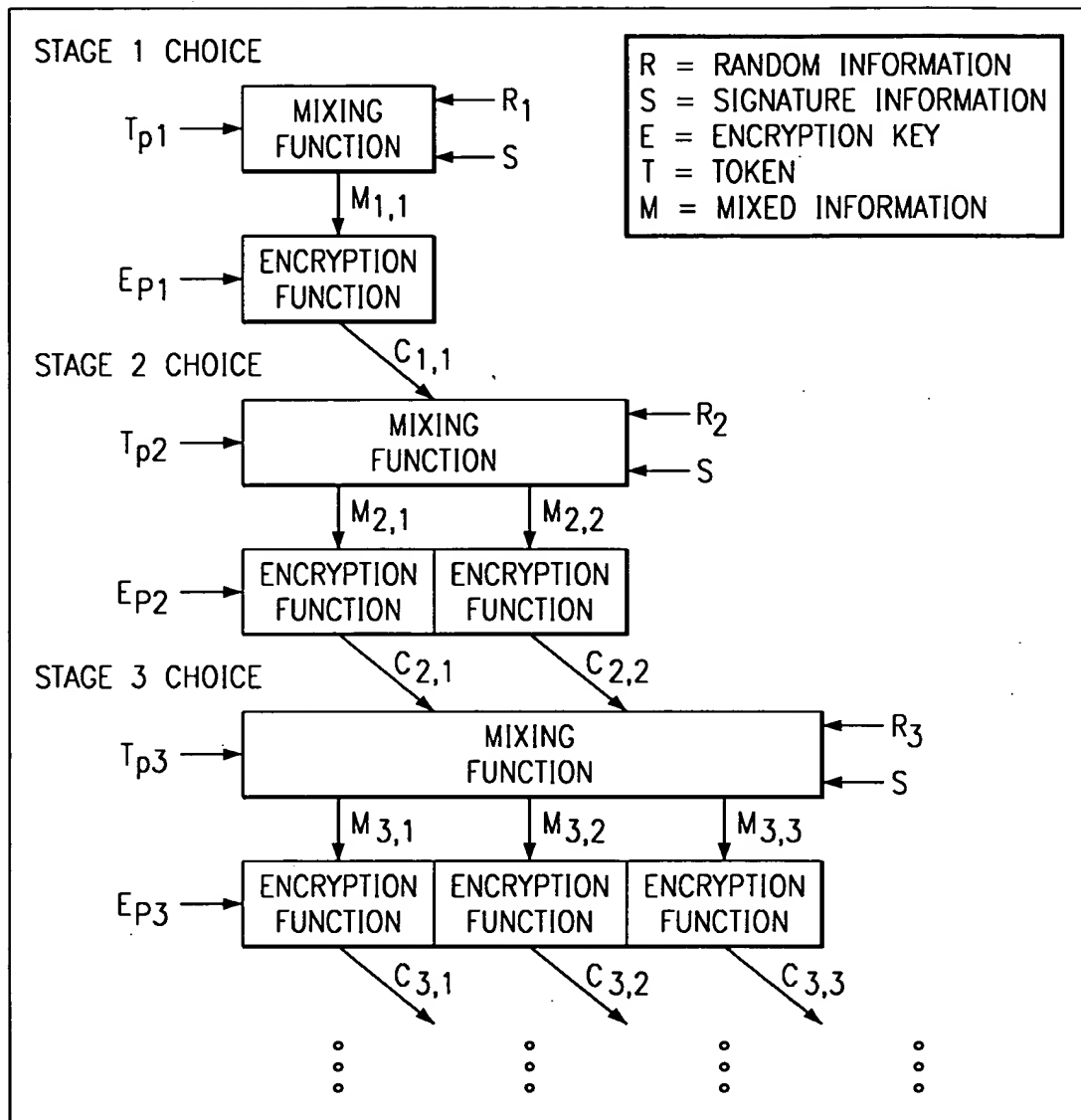


FIG. 27